

CERTAMEN MELASTOMATACEIS XXXIII.

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With this installment of novelties, all of the easy taxonomic decisions have been completed in the outpouring of recent collections from Bahia, Brazil. However, much more work is needed, particularly in Microlicia, to present a reasonable treatment of the Melastomataceae for this still poorly known region.

LAVOISIERA HARLEYI Wurdack, sp. nov.

L. nervulosa Naud. affinis, foliis 3-5-nervatis non reticulato-venosis stylo glabro differt.

Ramuli primum tetragonii demum teretes primum sicut folia sparsuscule glanduloso-setosi (pilis 1-2 mm longis) demum glabriusculi; nodi dense glanduloso-setulosi (0.2-0.3 mm). Folia sessilia imbricata; lamina 20-35 X 10-20 mm elliptico-oblonga apice rotundata basi late acuta vel obtusa, firma et essentia-liter integra, ad margines cartilaginea et glanduloso-ciliata, 3-5-nervata nervis secundariis nervulisque invisus. Flores 6-meri; hypanthium (ad torum) 10 mm longum usque ad medium densi-uscule glanduloso-setosum (pilis ca 1.5 mm longis); calycis tubus ca 1 mm longus, lobis ca 3 mm longis basaliter expansis extus sparse glanduloso-setosis glanduloso-ciliolatis intus glabris. Petala 34-35 X 16-19.5 mm ad margines apicem versus modice glandulosas (0.1 mm) extus ad basim sparsissime glandulosa aliquo glabra. Stamina dimorphica glabra; filamenta 13-13.5 mm vel 11.5-12 mm longa; connectivum 10 mm vel 3 mm prolongatum ventraliter ad basim in appendice 3 X 1 X 1 mm vel 2 X 0.8 X 0.8 mm hebeti productum. Stylus 12.5 X 1.3-0.4 mm glaber; ovarium 6(?)-locu-lare apice glabro leviter intruso.

Type Collection: R. M. Harley 19690 (holotype CEPEC 19692; isotypes K, US), collected on northeast face of summit ridge, Pico das Almas ca 25 km WNW of the Vila do Rio de Contas, Bahia, Brazil, elev. 1600-1800 m, 19 March 1977. "Bushy shrub to 2 m. Leaves viscid, rather bright green. Petals bright pinkish magenta. Anthers golden-yellow."

Paratype (topotypical, fruiting): Mori 12455 (CEPEC, US).

The suggested relative (isotype US) has leaves 7-9-nerved (at the base) and markedly reticulate-venose beneath, as well as somewhat longer calyx lobes and basally glandular-setulose style. Of the other species in this affinity with moderate-sized leaves, L. selliana Cogn. differs (ex descr.) at least in the much smaller flowers and glabrous hypanthia, while L. cogniauxiana Mello Barreto (ex descr. and photo) has larger 9-nerved leaves and 8-merous flowers. To L. nervulosa, I have referred (with some reservations) two collections (Mori 12551, Harley 18788)

from just south of Mucujé; both have sparser pubescence than Blanchet 3333 and petals yellow with the exposed part externally red in bud (rather than wholly pink). All of the examinable flowers and fruit of L. harleyi were 6-merous; the anther thecae were all insect-destroyed.

MICROLICIA HATSCHBACHII Wurdack, sp. nov.

M. balsamiferae (DC.) Mart. affinis, ramulis setulosis staminum maiorum connectivis plus prolongatis differt.

Ramuli primum obscure tetragonoi mox teretes modice vel densiuscule et subpersisterent glanduloso-setulosi pilis 0.2-0.4 mm longis. Petioli 0.5-1 mm longi subtus sparsiuscule glanduloso-setulosi; lamina (0.7-)1-1.5 X (0.4-)0.6-0.8 cm elliptica apice hebeti-acuto basi acuta, rigida et integra, ubique dense glanduloso-punctata, supra glabra, subtus glabra vel secus costam basim versus decidue glanduloso-setulosa, eciliata, 3-nervata. Flores in ramulis terminales 1-3, pedicellis ca 2 mm longis sicut hypanthiis basim versus sparse glanduloso-setulosis. Hypanthium (ad torum) 4.5-5.5 mm longum teres glutinosum; calycis tubus 1.3-1.5 mm longus, lobis 1.8-2 X 2.4-2.8 mm deltoideis hebeti-acutis. Petala glabra 16-17 X 9-13 mm asymmetrica obovata apice late obtuso. Stamina paulo dimorphica, filamentis 6-7.3 mm vel 6-6.5 mm longis, antherarum rostris obscure (0.5 mm) evolutis. Stamina maiora: thecae 4.4-6 X 0.8 X 1.1 mm; connectivum 1.8-2.5 mm prolongatum, appendice ventrali 0.6-0.7 mm longa hebeti. Stamina minora: thecae 4-5.3 X 0.7 X 1 mm; connectivum 0.9-1.5 mm prolongatum, appendice ventrali 0.4-0.5 mm longa hebeti. Stigma non expansum; stylus 8.5-12 X 0.5-0.2 mm in ovarii apicem 0.4-0.5 mm immersus; ovarium 3-loculare glabrum apice rotundato-lobulato. Semina 0.7 X 0.4 mm areolata.

Type Collection: G. Hatschbach 39696 (holotype MBM 48802; isotype US), collected at Rio Agreste, Mun. Morro do Chapéu, Bahia, Brazil, 17 Jan. 1977. "Arbusto muito ramoso, 1 m 70, flor rosada. Solo arenoso, junto a afloramentos de arenito."

Paratypes (all Morro do Chapéu region, Bahia, Brazil): Hatschbach & O. Guimaraes 42423 (MBM, US), Rodovia BA-052 8 km from Morro do Chapeú, elev. 900 m ("Arbusto ramoso, copado, 70 cm, flor rosada"); Hatschbach 39637 (MBM, US) ("Arbusto muito ramoso, 2 m, encosta de morro. Flor rosada"); Harley 19185 (CEPEC, K, US), Rio do Ferro Doido on BA-052 highway to Mundo Novo, 19.5 km SE of Morro do Chapeú, elev. 900 m ("Bushy shrub to 2 m with stems bare below. Leaves rigid, spreading, mid-green, slightly paler below. Sepals yellow green. Petals bright magenta. Anthers dark golden yellow. Stigma yellow with pinkish style"); Irwin, Harley, & Smith 32246 (US), Serra do Tombador 18 km E of Morro do Chapeú, elev. 1100 m ("Brittle ramose shrub ca 1.5 m tall. Corolla magenta; filaments red-violet; anthers yellow"); E. Pereira 2131 (RB, US), elev. 1000 m ("Arbusto de fl. roxas"); Davidse, Ramamoorthy, & Vital 11896 (MO), 19 km E of Morro do Chapeú, elev. 900 m ("Shrub 70 cm tall; petals reddish purple; leaves sticky").

Microlicia balsamifera is glabrous, with costulate

(especially basally) hypanthia, longer (ca 1.5 mm) anther rostra, and large stamen connectives prolonged only 1-1.5 mm; recent collections include Harley 15127, 15138, and 15423, all from the region north of Rio de Contas, Bahia. Other glabrous relatives include M. sincorensis (DC.) Mart., as well as perhaps M. blanchetiana (Naud.) Cogn. and M. crebropunctata Pilger. Among the pubescent species in Cogniaux' monograph, M. hatschbachii would perhaps key to near M. baccharoides Naud., which however has denser eglandular stem pubescence, leaf blades obtuse to rounded at the base, calyx lobes remote and subulate, and prolongation of the large stamen connectives 8-9 mm; recent materials referred by me to M. baccharoides include Harley 15901 and three Mori collections (12581, 12589, 12631), all from south of Mucujé, Bahia.

MICROLICIA HARLEYI Wurdack, sp. nov.

M. pallidae Cogn. et M. insigni Cham. affinis, foliis latioribus calycis lobis glanduloso-ciliatis petalis amplioribus differt.

Ramuli quadrangulati subtetrapteri glabri. Folia ascendens sessilia rigida essentialiter epunctata ciliolato-sub-serrulata (ciliis 0.5-0.8 mm longis subappressis in foliis floralibus glanduliferis in foliis inferioribus eglandulosis) ad apicem 0.5-0.8 mm pungentia alioqui glabra apice acuto base late acuta; folia inferiora 15-20 X 5-8 mm oblongo-elliptica 3-5-nervata; folia superiora 8-10 X 3-4 mm lanceata 3-nervata. Flores in ramulis foliosis terminales solitarii vel pauci; pedicelli ca 1 mm longi. Hypanthium (ad torum) 3 mm longum glabrum; calycis tubus ca 0.3 mm longus extus in torii zona modice glanduloso-setosus (setis ca 1.5 mm longis), lobis 6 X 1.8-2 mm oblongo-lanceatis ad basim contiguis ciliolato-serrulatis (ciliis glanduliferis ca 1 mm longis) ad apicem 1-1.2 mm pungentibus alioqui glabris. Petala 16-17 X 8-9 mm oblongo-obovata apice late acuto et setula caduce glandulifera terminato alioqui glabra. Stamina dimorphica glabra, filamentis 5 mm longis, antheris oblongis 0.2-0.3 mm rostratis poro 0.2 mm diam. ventraliter inclinato. Stamina maiora: thecae 3.3 X 0.7-0.8 mm; connectivum 7-7.5 mm prolongatum et ultra filamenti insertionem 1.5 mm porrectum incrassatum hebes. Stamina minora: thecae 2.3 mm longae; connectivum 2 mm prolongatum et ultra filamenti insertionem 0.3 mm porrectum non incrassatum hebes. Stigma non expansum; stylus 9 X 0.4-0.1 mm glaber; ovarium ca 2.5 mm longum glabrum 3-loculare.

Type Collection: R. M. Harley 19665 (holotype CEPEC 19690; isotypes K, US), collected in a marsh in the first caldera above the first escarpment, middle and upper northeast slopes of Pico das Almas ca 25 km WNW of the Vila do Rio de Contas, Bahia, Brazil, elev. 1600-1800 m, 19 March 1977. "Subshrub to 1 m. Petals magenta; anthers red."

Both suggested relatives have leaves up to 11 X 3.5 mm, sciliate calyx lobes, and petals up to 11 mm long.

PYRAMIA CAMBESSEDESIOIDES Wurdack, sp. nov.

A congeneribus foliis parvis fasciculatis hypanthiis glabris differt.

Ramuli obscure quadrangulati sicut petioli modice pilis pinoideis 0.1-0.2 mm longis setulosi. Folia plerumque ad nodos fasciculati; petioli 0.1-0.2 mm longi; lamina 0.5-1 X 0.1-0.3 cm oblonga apice hebeti-acuto vel obtuso vel rotundato basi late acuta vel obtusa, rigida et integra, supra glabra, subtus sparse pilis pinoideis 0.1 mm longis deciduis setulosa, 1-3-nervata nervis secundariis nervulisque invisis. Panicula 2-5 cm longa foliosa submultiflora; flores 5-6-meri, pedicellis 5-7 mm longis, bracteolis 0.8-1 mm longis oblongo-ovatis persistentibus ca 1-1.5 mm infra hypanthium insertis. Hypanthium (ad torum) 5-5.5 mm longum glabrum; calycis tubus 0.4-0.8 mm longus, lobis 0.6-0.8 mm longis ovatis extus valde carinatis; torus intus sparse glandulosus. Petala glabra eciliata 7.5-10.5 X 4.4-5.3 mm elliptico-oblonga apice acuto et apiculato. Stamina in dimensionibus paulo dimorphica; filamenta 5.8-7.4 mm vel 4.8-6 mm longa apicem versus glandulosa; antherae 5.7-6 X 0.8-1 mm vel 4.8-5.2 X 0.8-0.9 mm paulo subulatae, thecis ad basim ventraliter 0.2-0.3 mm pro-longatis. Stylus 16-16.5 X 0.4 mm basim versus sparse glandulosus; ovarium 5(-6)-loculare apice modice glanduloso-setuloso (0.1-0.3 mm).

Type Collection: S. A. Mori, R. M. King, T. S. dos Santos, & J. L. Hage 12576 (holotype CEPEC 17835; isotype US), collected 3 km south of Mucujé, Município Mucujé, Bahia, Brazil, elev. 1000 m, 26 July 1979. "Arbusto 1,5 m. Calice verde, corola vermelha alaranjada, com uma mancha amarela nas bases das pétalas, estames completamente amarelos."

Paratypes (all Bahia, Brazil): Edmundo Pereira 2181 (US, RB), from between Palmeiras and Lençóis ("Arbusto, pétalas com a metade superior cór de abobóra e a base e os estames amarelo"); A. P. Duarte 9358 (Pereira 10071) (RB, US), from Lençóis ("Arbusto 1 m, fl amarela e vermelha"); Mori & Benton 13195 (CEPEC, US), from between Andarai and Mucujé 2 km south of Igatu, elev. 800 m.

The three previously known species of *Pyramia* have non-fasciculate leaves with blades 0.7-3 cm wide, as well as densely puberulent hypanthia. The Bahia endemic suggests the evolutionary end of *Pyramia* towards *Cambessedesia*, the 5-6-celled ovaries being the technical character of the former genus; the pubescence qualitatively is like that in the Bahia variants of *C. membranacea* Gardn. and *C. harleyi* Wurdack (vide infra).

CAMBESSEDESIA HARLEYI Wurdack, sp. nov.

C. membranacea Gardn. affinis, petalis glanduloso-ciliolatis differt.

Ramuli primum rotundato-quadrangulati demum teretes sicut inflorescentia hypanthiaque modice glanduloso-setuloso (pilis plerumque 0.2-0.5 mm longis ad basim imperspicue papillosis) et sicut laminarum subtus venae primariae petioliique modice vel densiuscule setulosi (pilis asperis eglandulosis ca 0.2-0.3 mm

longis). Petioli 0.2-0.5 cm longi; lamina (1-)1.5-2.5(-3) X 1-2(-3.5) cm ovato-suborbicularis apice rotundato basi paulo (usque ad 0.5 cm) cordata, subrigida et distinete irregulariterque crenato-serrulata, supra glabra et dense bullata, subtus foveolata et in venulis superficie que modice pilis asperis 0.2-0.3 mm longis setulosa, 5(-7)-nervata nervis exterioribus usque ad basim liberis vel paulo (ad 2 mm) coalitis. Panicula 3-7 cm longa foliolosa submultiflora; flores 5-meri, pedicellis plerumque ca 2 mm longis, bracteolis ca 1-1.5 X 1-1.5 mm suborbicularibus vel ovatis persistentibus. Hypanthium (ad torum) 6 mm longum paullulo costulatum; calycis tubus 0.5-0.6 mm longus, lobis 0.5-0.6 mm longis late ovatis paullulo hebeti-apiculatis; torus intus inconspicue glanduloso-puberulus (0.1 mm). Petala 5.7-6.5 X 3.7-4.5 mm elliptico-ovata apice hebeti-acuto apicem versus crenulata et glanduloso-ciliolata (0.3-0.4 mm) alioqui glabra. Stamina in dimensionibus paulo dimorphica; filamenta 10-10.5 mm vel 7.5-8 mm longa inconspicue glanduloso-puberula; antherae 6.5 X 1 mm vel 4.6 X 0.7 mm oblongo-subulatae, thecis ad basim ventraliter 0.2-0.3 mm prolongatis, poro 0.15-0.2 mm diam. ventraliter inclinato. Stigma punctiforme; stylus 20 X 0.4 mm basim versus glanduloso-puberulus; ovarium 3-loculare inconspicue glanduloso-puberulum.

Type Collection: R. M. Harley 19189 (holotype CEPEC 19687; isotypes K, US), collected at Rio do Ferro Doido southeast of Morro do Chapeu on BA 052 highway to Mundo Novo, Bahia, Brazil, elev. ca 900 m, 1 March 1977. "Subshrub to 1.5 m. Leaves strongly and finely bullate, mid-green above, pale beneath. Calyx red-tinged. Petals bright vermilion with small yellow basal zone. Stamens golden-yellow."

Paratypes (all Bahia, Brazil): Harley 16692 (CEPEC, K, US), from Serra do Curral Feio 16 km northwest of Lagoinha (5.5 km southwest of Delfino) on road to Minas do Mimoso, alt. 950-1000 m ("Shrub to 1 m. Petals vermilion with yellow base. Anthers yellow"); Irwin, Harley, & Smith 32431 (NY, US), topotypical ("Slender brittle shrub to ca 1.5 m. Corolla red, yellow at base; stamens yellow"); Hatschbach 39609 (US), from Morro do Chapeu ("Subarbusto 60 cm, flor vermelha, estames centraes amarelos"); Davidse, Ramamoorthy, & Vital 11864 (MO), from Chapada da Diamantina 34 km east of Morro do Chapeu, elev. 910 m ("Shrub to 1 m; petals red; stamens and style yellow, turning orange in older flowers").

Cambessedesia membranacea has eciliate petals and (usually) glabrous stamen filaments and style; the type collection (NY) and Hatschbach 34127 (Serra Petrolina, M. Grosso) have leaf blades beneath glabrous and hypanthia nearly or quite glabrous. In Goias and Bahia, two variants of C. membranacea have been collected, both with the branchlet internodes and leaf blades beneath sparsely to moderately setulose with roughened hairs like those in C. harleyi. One of these variants, centered on Pico das Almas (Harley 19508 and 19609) and Serra do Rio de Contas (Harley 15161, Mori 12343), has glabrous hypanthia; the other variant, with glandular-setulose hypanthia, occurs in both

Goias (BR 354, Mineiros, Hatschbach 34255) and Bahia (Serra Agua de Rega, Irwin 30899; Serra Sincora, Froes 20154, Harley 15585 and 15852). No material of C. eichleri Cogn. (Serra Caraça, Minas, fide Glaziou) has been seen, but from the description the much larger ovate acute leaves and eciliate petals are differences from C. harleyi. However, the puberulous variants above referred to C. membranacea should be compared with C. eichleri. The glandular-ciliolate corolla and glandular-puberulous filaments and style of C. harleyi are like those in C. weddellii Naud.; that Minas Gerais species, however, lacks roughened trichomes, having only smooth (and glandular) hairs.

CAMBESSEDESIA GRACILIS Wurdack, sp. nov.

C. tenui Markgraf affinis, foliis angustis esetulososis staminibus minoribus differt.

Ramuli primum obscure quadrangulati demum teretes glabri (in nodis obscure caduceque puberuli pilis ca 0.1 mm longis). Petioli 0.1-0.4 cm longi glabri; lamina (1-)2-3(-3.8) X (0.1)0.2-0.3 cm linearis-oblonga apice basique acuto, firme chartacea et integra vel apicem versus obscure distanterque serrulata, utrinque (glandulis paucis praecipue subtus exceptis) glabra, 1-3-nervata nervis secundariis nervulisque invisus. Flores 5-meri solitarii terminales, pedicellis ca 2 mm longis sparse glandulosos. Hypanthium (ad torum) ca 4.5 mm longum modice glandulosos-setulosum (setulis 0.6-0.8 mm longis); calycis tubus ca 0.3 mm longus, lobis ca 1.2 mm longis ovatis extus carinatis. Petala sparse glandulosos-ciliolata (ciliis 0.1-0.2 mm longis) ca 6 X 4 mm elliptica apice obtuso et ca 0.3 mm apiculato. Filamenta 2.5-3 mm longa sicut stylus sparse glandulosa; antherae 4 vel 2.5 X 0.5 mm oblongae, theccis ventraliter ad basim 0.4-0.5 mm vel 0.1-0.2 mm protractis, poro minuto ventraliter inclinato. Ovarium 3-loculare apice modice glandulosos-setulosum (0.2-0.4 mm).

Type Collection: S. A. Mori, R. M. King, T. S. dos Santos, & J. L. Hage 12533 (holotype CEPEC 16969; isotype US), collected on Pico das Almas 18 km from Rio de Contas, Bahia, Brazil, elev. 1300-1400 m, 24 July 1979. "Subarbusto. Cálice verde, o restante da flor amarela."

Paratype: Mori & Benton 13574 (CEPEC, NY), near-topotypical, elev. 1200 m. "Subarbusto 50 cm de altura Cálice verde con pelos avermelhados, corola e estames amarelos."

The suggested relative has sparsely glandular-setulose branchlets, lower leaf surfaces, and leaf margins, much wider oval leaves (1-2.5 cm wide) and large anthers 6-6.5 mm long. Cambessedesia hilariana (Kunth) DC. var. longifolia Cogn. has leaves rather like those of C. gracilis and glandular-ciliolate petals, but the leaves are fascicled, the branchlet nodes distinctly villosulous, and the large anthers much longer; the variety is perhaps specifically distinct from typical C. hilariana and has both filaments and style sparsely glandular-puberulous basally (a feature also true to some extent in other varieties).

MARCETIA SINCORENSIS Wurdack, sp. nov.

M. nervulosae Markgraf affinis, ramulis (nодis exceptis) esetulososis, foliis ad apicem acutis nervulis subtus ob indumentum subamorphum occultis differt.

Ramuli quadrangulati modice resinoso-granulosi esetosi (nодis exceptis); nodi obscure caduceque glanduloso-setulosi pilis 0.1-0.2 mm longis. Folia essentialiter sessilia, petiolis vix 0.5 mm longis; lamina (8-)10-18 X (5-)7-9(-13) mm ovata vel oblongo-ovata apice acuto basi rotundato-truncata, rigida, supra primum sparse resinoso-glandulosa mox glabrata, subtus dense resinoso-granulosa, (7-)9-nervata nervulis subtus paulo denseque elevato-reticulatis ob indumentum obscuris. Flores in foliorum superiorum axillis oppositis solitarii (in cyma pauciflora foliosa 2-3 cm longa aggregati); pedicelli 1-2 mm longi, bracteolis ca 3 X 0.7 mm persistentibus. Hypanthium (ad torum) 6.5 mm longum sparsiuscule resinoso-granulosum esetulosum; calycis tubus 0.4 mm longus, lobis 3-3.5 X ca 0.7 mm subulatis remotis. Petala 7.5-8 X 5 mm elliptica (apice acuto) minute (0.05 mm) glanduloso-ciliolata alioqui glabra. Stamina isomorphic glabra; filaments 6.5 mm longa; thecae 6.5-6.6 X 1 X 1 mm oblongo-subulatae, poro 0.15 mm diam. ventraliter inclinato, connectivo ad basim paulo incrassato. Stigma punctiforme; stylus 12.5 X 0.5-0.1 mm glaber; ovarium 4-loculare glabrum.

Type Collection: R. M. Harley 18855 (holotype CEPEC 19249; isotypes K, US), collected 10-15 km north of Mucujé on road to Andaraí, Serra do Sincorá, Bahia, Brazil, elev. ca 1100 m, 18 Feb. 1977. "Shrub to 1.5 m. Leaves grey, paler beneath. Petals white. Stamens with showy yellow anthers and white filaments."

Paratypes: Mori, King, dos Santos, & Hage 12657 (CEPEC, US; "Arbusto 1,5 m de altura. Corola branca, filetes e estilete brancos.") and 12666 (CEPEC, US; fruiting), both from 10-12 km northwest of Mucujé on road to Andaraí, Bahia, Brazil, elev. 1000 m.

Marcetia nervulosa has branchlet internodes densely setulose with rather robust caducously gland-tipped hairs, leaves with obtuse to rounded apices and with the nervules beneath obvious and moderately setulose with gland-tipped hairs 0.1-0.3 mm long, and hypanthia definitely (but rather sparsely) setulose with gland-tipped hairs 0.1-0.3 mm long. While the petals of M. nervulosa were thought by Markgraf to be yellow, this may well have been a drying artifact. The only recent collection seen of M. nervulosa is Mori 12915 (Pai Inácio ca. 15 km NE of Palmeiras, Mun. Palmeiras, Bahia, elev. 1000-1200 m), fruiting.

MARCETIA MACROPHYLLA Wurdack, sp. nov.

M. grandiflorae Markgraf affinis, ramulorum pubescentia longiore petalis angustioribus antheris paulo subulatis differt.

Ramuli quadrangulati dense setosi pilis gracilibus ca 3-4 mm longis eglandulosis pilis glanduliferis ca 1 mm longis modice intermixtis. Folia essentialiter sessilia, petiolis ca 1-1.5 mm longis; lamina plerumque 2.5-4 X 1.5-2(-2.5) cm oblongo-elliptica

apice obtuse rotundato basi paullulo (1-2 mm) cordata, rigida, supra dense subsericeo-strigosa pilis gracilibus eglandulosis ca 2 mm longis, subtus dense appresso-setosa pilis gracilibus ca 2 mm longis pilis glanduliferis ca 0.1 mm longis inconspicue intermixtis, (7)-9(-11)-nervata nervulis subtus crebro elevato-reticulatis ob pilos occultis. Panicula foliosa 2-4 cm longa pauciflora; pedicelli plerumque 4-6 mm longi sicut hypanthia (extus) et sepala (ubique) densiuscule setosi pilis gracilibus 1-2 mm longis pro parte glanduliferis. Hypanthium (ad torum) 6-7.5 mm longum; calycis tubus ca 0.2 mm longus, lobis 5.2-7 X 1-1.2 mm lanceatis. Petala 6.5-8 X 3.7-5 mm anguste ovata apice acuto et setula 0.5-0.7 mm longa terminato glandulosociliolata et extus circum margines glandulosopuberula. Stamina isomorpha glabra; filamenta 7.2-8 mm longa; antherae 7-7.5 X 0.9-1 mm paulo subulatae poro 0.15-0.2 mm diam. ventraliter inclinato; connectivum ad basim vix incrassatum. Stigma punctiforme; stylus 19-20 X 0.4-0.5 mm glaber; ovarium 4-loculare glabrum.

Type Collection: R. M. Harley 15986 (holotype CEPEC; isotypes K, US), collected near Rio Cumbuca ca 3 km north of Mucujé on Andaraí road, Serra do Sincorá, Bahia, Brazil, elev. ca 850 m, 5 Feb. 1974. "Shrub ca 1.5 m. Leaves dark green with impressed veins above, paler beneath. Calyx red. Petals magenta; stamens with white filaments and deep yellow anthers."

Paratypes (both Serra do Sincorá, Bahia): R. L. Froes 20236 (NY, US), from Mucujé; Harley 18667 (CEPEC, K, US), from south of Andaraí 16 km along Mucujé road near Xique-Xique, elev. 700-900 m. "Shrub to 3 m, with bright red-brown bark. Leaves spreading, rigid, dull green above, paler beneath. Calyx red; petals pale magenta. Stamens with golden-yellow anthers and pink filaments; style deep pink."

The suggested relative has stem pubescence 1-1.5 mm long, leaf blades 14-16 X 10-11 mm with 13 primary nerves, calyx lobes 10 mm long, petals 18 X 18 mm, and oblong anthers with a broad (0.3 mm) but slightly ventral pore. Another relative, M. velutina Markgraf, has short caudine pubescence like that of M. grandiflora, subrotund leaf blades 10-20 X 12-18 mm, calyx lobes only ca 3 mm long, and anther pore dorsally inclined (and anthers shaped as in M. macrophylla); two recent collections of this Bahia endemic are Harley 15164 (Serra do Rio de Contas) and Mori et al 12560 (Mucujé).

MARCIETIA LANUGINOSA Wurdack, sp. nov.

M. nummulariae Markgraf affinis, foliorum subtus ramulorumque pubescentia arachnoideo-lanuginosa differt.

Ramuli quadrangulati sicut foliorum laminae subtus densissime arachnoideo-lanuginosi pilis eglandulosis. Folia sessilia; lamina (0.7)-1-1.3 X (0.5-)0.9-1.3 cm ovato-suborbicularis apice late obtuso vel rotundato basi paulo (1 mm) cordato-amplexicauli, rigida, supra modice strigulosa pilis eglandulosis robustis plerumque 0.5-0.7 mm longis, 5-7-nervata. Flores ad ramorum apices solitarii vel in inflorescentia foliosa usque ad 3 cm longa aggregati; pedicelli 1-2 mm longi sicut hypanthia dense

pilis gracillimis laxis et paulo crispulis minute glanduliferis 1.5-2 mm longis induti. Hypanthium (ad torum) 3.5-4 mm longum; calycis tubus 0.2 mm longus, lobis 3.5 X 0.8 mm anguste oblongis remotis ubique dense glanduloso-setulosis. Petala 8.5-11 X 7-7.7 mm oblongo-elliptica apice setula glandulifera 0.6-0.7 mm longa terminato glanduloso-ciliolata alioqui glabra. Stamina isomorphica glabra; filamenta 5.1-5.4 mm longa; antherae 5-5.5 X 0.8-0.9 mm, poro 0.15 mm diam. paulo ventraliter inclinato, connectivo ad basim paullulo incrassato. Stigma punctiforme; stylus 21.5 X 0.4 mm glaber; ovarium 4-loculare glabrum.

Type Collection: R. M. Harley 15828 (holotype CEPEC; isotypes K, US), collected ca 10 km north of Barra da Estiva by Rio Preto on Ibicoara road, Serra do Sincorá, Bahia, Brazil, elev. 1100 m, 2 Feb. 1974. "Subshrub 20 cm high. Flowers magenta."

Paratypes (all Bahia): Harley 15095 (CEPEC, K, US), from ca 6 km north of town of Rio de Contas on Abaira road, Serra do Rio de Contas, elev. 1000 m ("Brittle-stemmed decumbent shrub to ca 20 cm"); Harley 15714 (CEPEC, K, US), from north face of Serra de Ouro, 7 km south of Barra da Estiva on Ituacu road, Serra do Sincora, elev. ca 1150 m ("Subshrub with magenta flowers"); Harley 20001 (CEPEC, K, US), from ca 5 km east of Vila do Rio de Contas on Marcolina Moura road, Serra do Rio de Contas, elev. 1000 m ("Erect shrublet with single stems to 10 cm high. Stem and underside of leaves white-woolly. Leaves above dark green, with white appressed hairs. Calyx lobes maroon; petals brilliant mauve; filaments white; anthers lemon yellow; style magenta"); King & Bishop 8613 (UB, US), from 16 km north of Livramento do Brumado along road to Arapiranga, elev. 900 m ("Corolla magenta").

Marcetia nummularia has leaves of similar shape but stems and primary leaf veins beneath with discrete erect setulæ. Evidently Markgraf's floral dimensions were taken from a bud (packet on Luetzelburg 175, M) and there are now only fruit visible on the specimen branches; the petals are probably larger than 2 mm.

MARCETIA VISCIDA Wurdack, sp. nov.

M. sincorensi Wurdack affinis, foliis distincte petiolatis laminis ad basim acutis calycis lobis pedicellisque longioribus differt.

Ramuli obscure quadrangulati sicut pedicelli calycis lobi hypanthiaque glabri. Petioli 1.5-2.5 mm longi; lamina 12-24 X 4-6 mm lanceata vel oblongo-lanceata apice hebeti-acuto basi late acuta, subrigida, supra glabra, subtus densiuscule arachnoideo-furfuracea, (5-)7-nervata nervulis subtus ob indumentum occultis. Flores in foliorum superiorem axillis oppositis singuli, pedicellis ca 5 mm longis, bracteolis 3-5 X 0.6-1 mm persistentibus. Hypanthium (ad torum) 4.5 mm longum; calycis tubus 0.3 mm longus, lobis 6.3-6.6 X 1.1-1.2 mm oblongis remotis apice rotundato; torus intus sparse glanduloso-setulosus. Petala 12 X 8-8.2 mm elliptica (apice late acuto vel obtuso) minute glanduloso-ciliolata. Stamina isomorphica glabra; filamenta 4 mm

longa; antherae 4.5-4.8 X 0.7-0.8 X 0.7 mm oblongae poro 0.2 mm diam. ventraliter inclinato, connectivo ad basim ventraliter bilobulato-incrassato. Stigma punctiforme; stylus 6.6 X 0.4 mm sparse glandulosus; ovarium semper 4-loculare glabrum.

Type Collection: R. M. Harley 15162 (holotype CEPEC; isotypes K, US), collected 12-14 km north of town of Rio de Contas on road to Mato Grosso, Serra do Rio de Contas, Bahia, Brazil, elev. ca 1200 m, 17 Jan. 1974. "Viscid wiry subshrub to ca 35 cm. Petals white or cream."

Paratype: Harley 20149 (K), collected 2.5-5 km south of Vila do Rio de Contas, Bahia, Brazil, elev. ca 980 m. "Spindly shrub to ca 75 cm with bare stems and leaves mainly fallen. Leaves rigid, dull dark green, paler beneath. Calyx red-tinged, very viscid. Petals white; anthers yellow; filaments white."

Marcetia sincorensis has essentially sessile and thicker leaves with rounded-truncate base, pedicels 1-2 mm long, subulate calyx lobes 3-3.5 mm long, and petals 7.5-8 X 5 mm, as well as more subulate anthers with less distinct ventro-basal connective thickening.

MARCETIA FORMOSA Wurdack, sp. nov.

M. viscidae Wurdack affinis, foliis 9-nervatis floribus maioribus petalis magentis differt.

Ramuli rotundato-quadrangulati sicut foliorum venae primariae subtus hypanthiaque densiscule caduceaque resinoso-granulosi esetosi. Petioli 2-2.5 mm longi crassi; lamina 20-30 X 6-12 mm oblongo-elliptica apice hebeti-obtuso basi late acuta, rigida, supra primum modice resinoso-granulosa glabrata, subtus in superficie dense arachnoideo-furfuracea, 9-nervata. Flores in foliorum superiorem axillis oppositis solitarii, pedicellis 10-12 mm longis, bracteolis non visis. Hypanthium (ad torum) 6.5 mm longum paulo obtuseque 8-costatum; calycis tubus 0.5 mm longus, lobis 10.5-11 X 2 mm (apice rotundato); torus intus dense glanduloso-ciliata pilis gracillimis 2.5-2.7 mm longis. Petala 24-25 X 20-21 mm minute (0.05 mm) glanduloso-ciliolata alioqui glabra. Stamina isomorphica glabra; filamenta 6 mm longa; antherae 5-5.5 X 1.6-2 X 1.5 mm oblongae, poro 0.3 mm diam. ventraliter inclinato, connectivo ad basim dorsaliter incrassato. Stigma punctiforme; stylus 10 X 0.35 mm glaber; ovarium 4-loculare glabrum.

Type Collection: R. M. Harley 15452 (holotype CEPEC; isotypes K, US), collected on slopes of Pico das Almas ca 25 km WNW of Rio de Contas, Bahia, Brazil, elev. ca 1600 m, 23 Jan. 1974. "Wiry shrub to ca 1 m with leaves very dark green above, greyish beneath. Calyx viscid. Petals deep very bright magenta."

Both species share the feature of the torus being glandular-puberulous within. Certainly M. formosa has the largest flowers now known in the genus.

MARCETIA HARLEYI Wurdack, sp. nov.

M. sincorensi Wurdack affinis, foliis floribusque minoribus ovario 3-loculari differt.

Ramuli obscure tetragoni sicut folia subtus calycis lobi (intus et extus) hypanthiaque dense furfuracei indumento ut videtur subamorpho sed magnificatione maxima glanduloso. Folia essentialiter sessilia (petiolis crassis obscuris ca 0.3 mm longis) 5-8(-11) X 2-5 mm oblongo-elliptica apice hebeti-acuto vel obtuso basi late acuta, rigida, supra glabra, 5-7(-9)-nervata nervulis on indumentum occultis. Flores in foliorum superiorem axillis oppositis solitarii, pedicellis ca 2 mm longis, bracteolis 2-2.5 X 0.8-1 mm persistentibus. Hypanthium (ad torum) 3 mm longum obscure 8-costatum; calycis tubus 1.2-1.5 mm longus, lobis 2.4-2.5 X 1.5 mm ovato-oblongis obtusis remotis, appendicibus intercalycinis non evolutis. Petala 8-9.5 X 7.5-9.5 mm late obovata (apice rotundato) minutissime glanduloso-ciliolata alioqui glabra. Stamina isomorphica glabra; filamenta 4 mm longa; thecae 2.7-2.9 X 0.9-1 X 0.8-1 mm lanceatae, poro 0.15 mm diam. ventraliter inclinato, connectivo ad basim paulo incrassato. Stigma punctiforme; stylus ca 5 X 0.35-0.4 mm glaber; ovarium semper 3-loculare glabrum.

Type Collection: R. M. Harley 15698 (holotype CEPEC; isotypes K, US), collected on north slope of Serra de Ouro 7 km south of Barra da Estiva on Ituacu road, Serra do Sincorá, Bahia, Brazil, elev. ca 1150 m, 30 Jan. 1974. "Subshrub 20 cm high. Flowers magenta."

Paratypes (all Bahia, Brazil): Harley 15518 (CEPEC, K, US), from 6 km north of Barra da Estiva on Ibicoara road, Serra do Sincorá, elev. 1100 m ("Wiry shrub to ca 50 cm. Leaves glossy, dull green above, grey beneath. Calyx red; petals magenta; filaments white; anthers bright yellow"); Harley 15841 (CEPEC, K, US), from 1 $\frac{1}{4}$ km north of Barra da Estiva near Ibicoara road, Serra do Sincorá, elev. 1100 m ("Wiry subshrub to ca 20 cm. Leaves dark green above, grey beneath. Petals magenta; anthers yellow"); Harley 15094 (CEPEC, K, US), from 6 km north of Rio de Contas on Abaira road, Serra do Rio de Contas ("Wiry subshrub to ca 20 cm. Leaves dull green. Petals bright magenta; stamens orange-yellow"); Irwin, Harley, & Smith 31075 (NY, US), from 24 km north of Seabra on road to Água de Rega, Serra da Água de Rega, elev. ca 1000 m ("Subshrub to ca 40 cm tall. Corolla rose-pink, aging to deeper pink"); Irwin, Harley, & Smith 32413 (NY, US), from Morro do Chapéu, Serra do Tombador, elev. 1125 m ("Subshrub ca 35 cm tall, from thick rootstalk. Corolla red-violet; filaments white; anthers yellow"); Hatschbach 39599 (US), from Morro do Chapéu ("Ereta 35 cm, flor purpurea, anteras e estames amarelos"); King & Bishop 8612 (UB, US), from 16 km north of Livramento do Brumado on road to Arapiranga, elev. 900 m ("Corolla magenta").

In qualitative foliar features, M. harleyi and M. sincorensis are quite compatible; however M. sincorensis has much larger flowers with acute petals. Technically the 3-celled ovary would remove M. harleyi from Sect. Marcetia, but the other species features (and lack of intersepalal appendages) do not suggest any close affinity with M. gracillima Cogn. and M. luetzelburgii Markgraf of Sect. Pseudomarcetia.

PTEROLEPIS HATSCHBACHII Wurdack, sp. nov.

P. weddelliana (Naud.) Triana affinis, floribus minoribus trimeris differt.

Suffrutex ut videtur ca 0.4 m superne ramosus; ramuli subalato-quadrangulati (alis ca 0.1 mm altis modice strigulosis pilis ad basim non productis) inter alas glabri. Petioli ca 0.5 mm longi crassi; lamina 1-2.5 X 0.4-0.8 cm lanceata apice acuto basi obtusa, chartacea et essentialiter integra appresso-ciliolata, supra sparsiuscule strigosa (pilis gracilibus ca 0.8-1.3 mm longis ad basim ca 0.2 mm adnatis), subtus in superficie sparse strigulosa pilis 0.3-0.5 mm longis, trinervata nervis primariis lateralibus supra invis. Flores fere semper 3-meri in axillis foliosis superioribus plerumque solitarii, pedicellis 1-1.5 mm longis. Hypanthium (ad torum) 4 mm longum sparse stri-gosum pilis omnibus simplicibus gracilibus eglandulosis 1-2 mm longis; calycis tubus 0.2 mm longus appendiculum axibus 0.7-0.8 mm longis, lobis 5-5.2 X 2.2-2.4 mm oblongo-lanceatis ciliolatis seta terminali ca 2 mm longa alioqui glabris. Petala 10 X 10-11 mm late obovata apiculata seta terminali ca 2 mm longa excepta glabra. Stamina in dimensionibus paullulo dimorphica glabra; filamenta 5.5 mm vel 4.8 mm longa; thecae 3.9-4 X 0.6 mm vel 3.4 X 0.5 mm subulatae, poro 0.15 mm diam. ventraliter inclinato; connectivum non prolongatum, lobis ventralibus incrassatis ca 0.4-0.5 X 0.5-0.6 mm. Stigma non expansum; stylus 11 X 0.4-0.15 mm glaber; ovarium 3-loculare pilis apicalibus 0.2-0.7 mm longis pro parte glanduliferis.

Type Collection: G. Hatschbach & O. Guimarães 42363 (holotype MBM 62898; isotype US), collected in moist sandy soil at Serra do Tombador, Mun. Morro do Chapeú, Bahia, Brazil, elev. 1050 m, 15 July 1979. "Flor lilas."

Pterolepis weddelliana has 4-merous flowers with the hypanthium plus calyx tube 6-7 mm long and equaled by the calyx lobes, as well as anthers ca 6 mm long and connective prolonged ca 0.5 mm; to P. weddelliana I have referred Woolston 906 (US, from Primavira, Alto Paraguay, Paraguay) and Steinbach 5151 (US, from Buena Vista, Prov. Sara, Depto. Santa Cruz, Bolivia, elev. 500 m). The other species placed by Cogniaux in this complex, P. repanda (DC.) Triana, has caulin pubescence on all sides (rather than confined to the angles), as well as larger flowers with longer stalks on the intersepalar hairs. I do not believe that the other trimerous species, P. trimera Ule, is closely related to P. hatschbachii (nor is the Sect. Trimero-calyx Ule natural). To P. trimera has been referred Hatschbach & Guimarães 42353, from Serra do Tombador, Bahia, elev. 1000 m, agreeing well with Ule's description (but with lilac petals); of the examinable flowers in this recent collection, 26 had 3 calyx lobes and 20 had 4 calyx lobes. All except 2 of the 42 examinable flowers or fruits in Hatschbach 42363 showed 3 sepals.